

## REMARKS

### Rejections of Claims Under 35 USC Section 103

In the Office Action, the Examiner rejected Claims 1, 9, and 12 under 35 USC § 102(b) as being anticipated by Fernandes (US Patent 3,590,558).

As the Examiner stated in the Office Action, Fernandes teaches a swirl separator (10) with a tubular housing (24) and axial inlet (46) with a swirl imparting means (44), a solid outlet opening (68), a co-axial gas outlet conduit (32) and bulb (74).

Fernandes does not teach or suggest the desirability of the solids outlet opening comprising an annular opening about a vortex extender pin as taught in applicants' Claim 1.

The *American Heritage Dictionary*, 4<sup>th</sup> Edition, defines annular as "shaped like or forming a ring." In other words, the annular opening in claim 1 is a ring shaped opening about the vortex extender pin.

The opening in Fernandes (68) is a very small hole provided in the bottom (54) of the tubular housing (24). This opening (68) will lead to the solids remaining at the bottom (54) and being reentrained in the vortex. In contrast an annular opening as taught in applicants' Claim 1 will allow improved solid separation from a gas.

Fernandes does not teach or suggest the desirability of an annular opening as recited in claim 1.

Dependent Claims 9 and 12 are allowable for at least the same reasons as independent Claim 1, discussed above, from which they depend.

Applicants respectfully request that the Examiner withdraw the rejection to Claims 1, 9, and 12.

Conclusion

Applicants respectfully submit that the claims are patentable over the cited art. In the event the Examiner has any questions or comments regarding the above-presented materials, the Examiner is invited to call the undersigned at the telephone number below prior to the issuance of any formal action.

Respectfully submitted,

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